REMARKS

The specification has been amended to indicate that the US application listed on page 8 has been published under No. 2004/0096843.

Claim 1 has been amended to specify that the RNAi molecule is a substrate for mammalian Dicer. Support for this amendment can be found, for example, in paragraphs [00014] - [00018], [00027] and [00029].

Claims 2, 4 and 5 have been amended to be consistent with claim 1 in their reference to RNAi molecule.

Claim 11 has been amended to specify that the RNAi molecule is a substrate for mammalian Dicer. Support for this amendment can be found, for example, in paragraphs [00014] - [00018], [00027] and [00029].

New claims 13 and 14 have been added to individually claim the shRNA and miRNA, respectively, of claim 4.

It is submitted that these amendments do not constitute new matter, and their entry is requested.

The amendment to the specification obviates the objection set forth on page 3 of the Office Action. Withdrawal of this objection is requested.

The Examiner rejected claims 1-3, 5, 6 and 11-12 under 35 U.S.C. § 102(b) as being anticipated by Rossi et al. (US 6,100,087; "Rossi et al. '087") in view of the interpretation that a ribozyme is an interfering RNA molecule. Claims 1 and 11 have been amended to specify that the RNAi molecule is a substrate for Dicer. Since a ribozyme is not a substrate for Dicer, Rossi et al. '087 does not anticipate the claimed invention.

In view of the above amendments and remarks, it is submitted that the claimed invention is not anticipated by the cited prior art. Withdrawal of this rejection is requested.

The Examiner rejected claims 1 and 4 under 35 U.S.C. § 103(a) as being obvious over Rossi et al. '087 in view of Lau et al. (*Science* **294**:858-862, 2001). In essence, the Examiner contends that

it would have been *prima facie* obvious to substitute the miRNA of Lau et al. for the ribozyme in Rossi et al. '087. It is submitted that the Examiner is in error in this rejection.

Specifically, Applicants submit that Rossi et al. '087 is directed to ribozymes whereas Lau et al. is directed to worm miRNAs. There is no suggestion in either of these cited references that the worm miRNAs should or could be substituted for the ribozymes of Rossi et al. '087. Applicants also note that Lau et al. describes complex RNA structures in worms and does not recite any means to express them in mammalian cells. Indeed, nothing in Lau et al. teaches how to mediate the expression of exogenous miRNA in any species, even worms. There is no suggestion in Lau et al. that the disclosed miRNAs are substrates for mammalian Dicer, and it is known that ribozymes are not substrates for mammalian Dicer. Thus, there is no suggestion in the cited references that they could be combined in the manner that the Examiner has proposed. Consequently, Applicants submit that the claimed invention is not obvious from Rossi et al. '087 and Lau et al.

In view of the above amendments and remarks, it is submitted that the claimed invention is not obvious from the cited prior art. Withdrawal of this rejection is requested.

The Examiner rejected claims 1 and 11-12 under 35 U.S.C. § 103(a) as being obvious over Rossi et al. (US 6,995,258; "Rossi et al. '258") in view of Frey et al. (Benn and Frey, Abstracts of General Meeting of American Society of Microbiology, 92:225, H254, 1992). In essence, the Examiner contends that it would have been *prima facie* obvious to use the adenoviral VA1 promoter as the RNA pol III promoter in Rossi et al. '258. It is submitted that the Examiner is in error in this rejection.

Specifically, Rossi et al. '258 teach the targeting of ribozymes to the nucleoli of cells. It was well known at the time of the present invention, as stated in paragraph [00028] of the specification, that VA1 transcripts are primarily located in the cytoplasm. Because Rossi et al. '258 and Frey et al. target their molecules to different parts of the cell, there is no suggestion or motivation within these references to combine them as proposed by the Examiner. Thus, claims 1 and 11-12 are not *prima facie* obvious from Rossi et al. '258 and Frey et al.

Although Applicants submit that claims 1 and 11-12 are not *prima facie* obvious from Rossi et al. '258 and Frey et al., they also note that Rossi et al. '258 is disqualified as prior art under 35 U.S.C. § 103(c) in a rejection under 35 U.S.C. § 103(a). Specifically, the undersigned states that

> **Application Serial No. 10/629,895 and U.S. Patent No. 6,995,258 were, at the time the invention of Application Serial No. 10/629,895 was made, owned by the City of Hope.**

In view of this statement, Applicants submit that Rossi et al. '258 is disqualified as prior art.

In view of the above amendments and remarks, it is submitted that the claimed invention is not obvious from the cited references. Withdrawal of this rejection is requested.

The Examiner rejected claims 1 and 11-12 under the judicially created doctrine of obviousness-type double patenting over claims 1, 5 and 9 of U.S. Patent No. 6,100,087 on the basis that a ribozyme is an interfering RNA molecule. Claim 1 has been amended to specify that the interfering molecule is a substrate for Dicer. Since a ribozyme is not a substrate for Dicer, claims 1 and 11-12 of the present application are no longer subject to this rejection. Withdrawal of this rejection is requested.

The Examiner rejected claims 1 and 4 under the judicially created doctrine of obviousness-type double patenting over claims 1, 5 and 9 of U.S. Patent No. 6,100,087 in view of Lau et al. Applicants submit that the claimed subject matter is not obviousness-type double patenting for the same reasons discussed above for the obviousness rejection. That is, if the claimed subject matter is not obvious from the cited prior art as detailed above, then there is also no obviousness-type double patenting. Withdrawal of this rejection is requested.

The Examiner rejected claims 1 and 10-11under the judicially created doctrine of obviousness-type double patenting over claims 1 and 7-9 of U.S. Patent No. 6,995,258 in view of Frey et al. Applicants submit that the claimed subject matter is not obviousness-type double patenting for the same reasons discussed above for the obviousness rejection. That is, if the claimed

subject matter is not obvious from the cited prior art as detailed above, then there is also no obviousness-type double patenting. Withdrawal of this rejection is requested.

The Examiner has contended that claims 1 and 10-11 are directed to an invention not patentably distinct from claims 1 and 7-9 of commonly assigned U.S. Patent No. 6,995,258. As set forth above, the '258 patent and the invention of the present application were commonly owned at the time of the present invention. Thus, the '258 patent is disqualified as prior art, and as noted above, the present claims do not encompass ribozymes as disclosed in the '258 patent. Thus, claims 1 and 10-11 are patentably distinct from the claims of the '258 patent.

Applicants note that process claims 7-10 are dependent on claims 1 and 4-6, respectively. Because the product claims are patentable for the reasons provided above, Applicants submit that these process claims should be rejoined with the product claims as noted by the Examiner in the Office Action mailed 29 November 2005.

In view of the above amendments and remarks, Applicants believe that the present claims satisfy the provisions of the patent statutes and are patentable over the cited prior art. Reconsideration of the application and early notice of allowance are requested. The Examiner is invited to telephone the undersigned to expedite the prosecution of the application..

Respectfully submitted,

ROTHWELL, FIGG, ERNST & MANBECK, p.c.

By _____

Jeffrey L. Ihnen
Registration No. 28,957
1425 K Street, N.W., Suite 800
Washington, D.C. 20005
Telephone No.: (202) 783-6040
Facsimile No.: (202) 783-6031

#1362012v1<RFDMS> -1954-413.Amend2b